November 25, 2015

GOAL: Global Opportunity Asset Locator

Portfolio Strategy Research

Resurgence of divergence; trades & positioning ahead of ECB & Fed

Tactically still Neutral; near-term risks vs. long-term value

We remain tactically Neutral on equities due to limited return potential post the relief rally and also remain Neutral on bonds ahead of the ECB and Fed. We prefer credit for now. Lower volatility, improvements in global growth and a pick-up in inflation should drive positive returns for equities and weigh on bonds in 2016. Key risks are sharply higher rates, further commodity weakness and CNY devaluation. Near term there is risk of further oil price weakness in case of a mild winter, which could weigh on risky assets, in particular US HY credit – remain Underweight commodities.

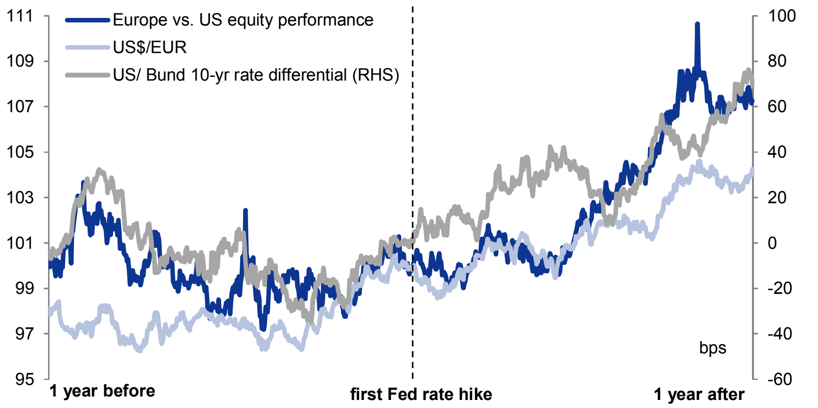
Resurgence of divergence into the ECB and Fed meetings

Monetary policy divergence will remain a key theme in 2016. In December the focus is likely to be on Europe vs. US divergence with policy shifts expected at the ECB and Fed meetings. Looking at cross-asset performance around first Fed rate hikes since the 1970s and ECB QE reveals consistent and intuitive patterns: EUR/US$ tends to weaken, US vs. German rate differentials tend to widen and European equities tend to outperform.

Positioning for divergence seems light, at least for Europe

While elevated US implied rate volatility and bearish S&P 500 option skew indicate some positioning ahead of the first Fed rate hike, we think positioning for an ECB QE trade remains light. EUR/US$ risk reversals are above levels from 1Q2015, EURO STOXX 50 call skew is at LT average and funds flows just started to pick up, in particular for currency-hedged ETFs.

Europe vs. US equities, rate differential and EUR/US$ at first Fed rate hike



Source: Goldman Sachs Global Investment Research.

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Remain tactically Neutral; focus on divergence ahead of ECB & Fed

We revisit our GOAL asset allocation ahead of the ECB (December 3) and Fed (December 16), and in context of the key themes and forecasts from our economists' outlooks (see *Global Economics Analyst: A Stealthy Path to Full Employment*, November 18, 2015 and *Global Markets Analyst: Top 10 Market Themes for 2016*, November 19, 2015). Our economists expect a moderate pick-up in global growth driven by a stabilization of hard-hit EM economies and a small acceleration in Europe and Japan. While the recovery has disappointed on GDP growth, G7 unemployment rates have declined at their fastest rate since 1970. **Key risks are: Rate shock, sharp oil price declines and China Yuan devaluation.**

Over 12-months, a pick-up in growth coupled with smaller declines in commodity prices supports a gradual move higher in inflation and our pro-risk asset allocation (Overweight equities, Underweight bonds). We remain constructive on equities, mainly for Europe and Japan. However, the return trajectory is flattening compared to the last 5 years. With the market priced for a shallow rate hike cycle and bonds still underpricing inflation risk, in our view, rate volatility could pick-up. We remain Underweight bonds. And we stay Neutral on credit but see attractive return potential for US HY credit on a 12-month horizon despite a gradual increase in rates, as we forecast more stable oil prices. **We remain Underweight commodities, but see less negative returns in 2016 relative to 2015** (see *Commodity Watch: Strategic case for commodities delayed, but not derailed*, November 18, 2015).

On a 3-month horizon, we remain Neutral on equites since we see less near-term upside post the recent relief rally. We also remain tactically Neutral on bonds ahead of further expected ECB easing and a shallow flight path from the Fed. So far the equity market has shrugged off a higher probability of a Fed rate hike due to better US growth and expectations for further ECB easing. We think both events will be dovish, but equities are already pricing some relief. **Also, we Underweight commodities near term and see risks of further oil price declines near-term as lack of storage capacity and mild weather could drive them to new lows.** This could intensify deflationary pressure and risks for commodity sectors in equities and credit. **We remain Overweight credit, with credit valuations remaining attractive post their poor performance over the summer.** However, with increased risks of further oil price and metals weakness, we downgrade US HY credit to Neutral on a 3-month basis due risk of higher defaults and worsening credit sentiment (see *Credit Strategy Research: Global Credit Outlook 2016*, November 21, 2015). We also continue to prefer European over US IG in the credit space. **We see more value in US HY credit compared to US equities** (see *GOAL Flash: Credit check*, October 7, 2015) **and move to Underweight S&P 500 on a 3-month basis, in line with our 12-month view. We remain Overweight European equities and credit (in local currency) on a 3-month basis to stay positioned for potential ECB and currency tailwinds.**

Exhibit 1: Our asset allocation, forecast returns and relative value within asset classes

3-Month Horizon (Q1 2016)		
Asset Class	**Return***	**Weight****
5 yr. Corp. Bonds	**0.2 %**	**OW**
USD HY	*1.2*	→
EUR IG	*0.9*	↑
USD IG	*-0.4*	→
Equities	**-0.6**	**N**
MSCI Asia Pac ex Japan	*1.4*	→
STOXX Europe 600	*0.2*	↑
TOPIX	*-1.8*	→
S&P 500	*-2.0*	↓
Cash	**0.1**	**N**
10 yr. Gov. Bonds	**-1.0**	**N**
Germany	*-0.2*	↑
US	*-1.8*	↓
Commodities	**-8.3**	**UW**

12-Month Horizon		
Asset Class	**Return***	**Weight****
Equities	**6.3 %**	**OW**
TOPIX	*11.7*	↑
MSCI Asia Pac ex Japan	*9.6*	→
STOXX Europe 600	*8.6*	↑
S&P 500	*1.5*	↓
5 yr. Corp. Bonds	**2.3**	**N**
USD HY	*8.2*	↑
EUR IG	*2.6*	→
USD IG	*0.3*	→
Cash	**0.2**	**N**
Commodities	**-1.0**	**UW**
10 yr. Gov. Bonds	**-3.1**	**UW**
Germany	*-1.8*	↑
US	*-4.3*	↓

** Return forecasts assume full currency hedging; ** Arrows denote preferences within asset classes.*

Source: Goldman Sachs Global Investment Research.

Portfolio considerations and trades

Monetary policy divergence likely to be a key theme in 2016, again

A key theme for next year remains monetary policy divergence between the Euro area and Japan relative to the US and UK (see *Global Economics Analyst: A Stealthy Path to Full Employment*, November 18, 2015)**. Ahead of potential additional ECB easing and an increasingly likely Fed rate hike in December we continue to have a relative preference for European assets (in equities, bonds and credit).** We also see continued Euro weakness into year-end, which should be a tailwind for European equities with equity/FX correlations close to their most negative levels in the last 25 years (see *GOAL: Lost in translation; equity/FX correlations back to extremes*, October 2, 2015). Similarly, we continue to expect a widening rate differential between the US and Europe, which should narrow the discount of European to US equities. Potential for divergence is reflected in our asset allocation - we are Overweight European equities, credit and bonds and we are Underweight US equities and bonds, while positioning neutrally on US IG and HY credit.

While we are positioned for monetary policy divergence and higher rates, near-term risks increase if rates increase too fast. While risky assets like equities and US HY credit tend to be able to digest a Fed rate hike cycle eventually, rate shocks may drive drawdowns (see *GOAL: Cross-asset risk premia & yields*, May 20, 2015). **If bond markets reprice rates sharply, equity/bond yield correlations are likely to shift negative leaving less potential for cross-asset diversification**. Also, a sharp appreciation of the Dollar puts more pressure on China (and commodities). We forecast decelerating growth in China which, combined with the CNY dollar peg, can increase pressure for another CNY devaluation. **While we believe markets will digest future CNY depreciations better than in August, the speed of Fed hike normalization and how China manages its currency in the face of slowing growth will be a key determinant of potential spillovers from China into global markets.**

Europe/US divergence trades we like into December

Short EUR/US$: One of the most direct ways to position for monetary policy divergence. Our 12-month forecast for EUR/$ remains 0.95, but we think the odds are that this level is reached sooner given the potential for the ECB to ease aggressively in December (see *Global Markets Daily: Top Trade #1: Long USD vs. short EUR & JPY*, November 20, 2015)

Buy US 10-year inflation: A main reason why we see a higher trajectory for policy rates is that with the economy expected to continue to expand faster than its 1.75% potential rate of growth, pressure on wages and core inflation will likely build. Indeed, core US CPI inflation is already trailing just below 2%. One of our markets team's top trades is to go long 10-year break-even US inflation (see *Global Markets Daily: Top Trade #2: Long US 10-year 'Breakeven' Inflation*, November 23, 2015).

German vs. US 10-year bonds: Our rates team recommends short 10-year US Treasuries and long 10- year Bunds, opened on July 17, 2015 at a spread of 153 bp, with a target of 190bp and a stop loss of 130 bp, currently trading at 175 bp (see *Macro Rates Analyst: 2016 Rates Outlook: A reflationary Year*, November 20, 2015).

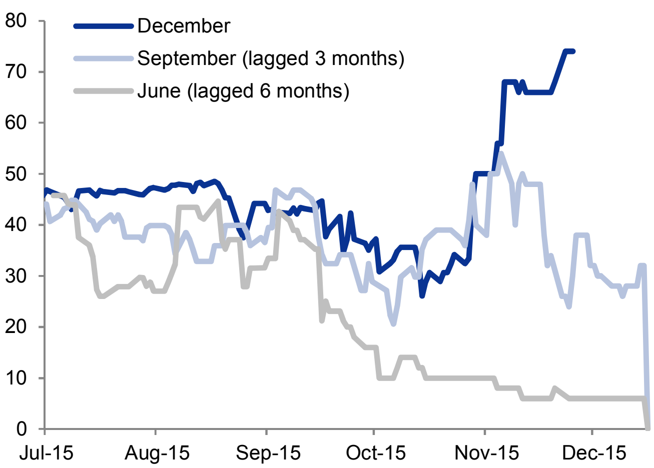
Buy EURO STOXX 50 (or DAX) calls/call spreads financed by S&P 500: We like near-term EURO STOXX 50 or DAX calls/call spreads into the ECB meeting financed by S&P 500 calls. However, due to elevated S&P 500 skew they can be financed better by S&P 500 puts. **We believe long-dated call options offer an attractive way to express European equity outperformance.** We also continue to like long-dated EURO STOXX 50 5-year calls financed by S&P 500 calls. In the 5-year bucket, EURO STOXX 50 implied volatility gets cheaper than S&P 500 and S&P 500 forward prices are generally much higher due to the rate and dividend yield differential – this allows for attractive strike combinations when creating zero-cost structures (see *GOAL Flash: Equity market concerns are easing with central bank easing*, October 25, 2015).

Resurgence of divergence, trades & positioning ahead of ECB & Fed

Monetary policy divergence Europe vs. US back in focus

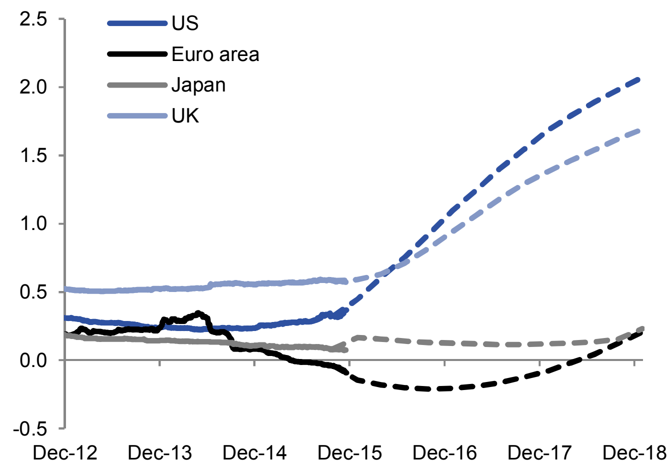
Post the better-than-expected US non-farm payrolls of November 6, the market implied probability of the first Fed rate hike in seven years has increased sharply and currently is at 72%, decoupling from the pattern of declines into the last 2 meetings (see Exhibit 2). As our economists have highlighted, the Fed has seldom hiked rates with the market pricing a probability of less than 70% (see *US Daily: Signals vs Surprises*, October 7, 2015). Our economists continue to expect a December lift-off and the recent solid US data (including jobless claims, auto sales, CPI inflation, Philadelphia Fed index, the nonmanufacturing ISM, and the more forward-looking orders and production components of the manufacturing ISM) has increased their confidence in that timing (see *US Views: Seven Years to the Day*, November 8, 2015). **However, the FOMC minutes of the October meeting indicated that the decision to hike in December is still highly data-dependent. In our view, the December 4 payrolls report and other data in the coming month would need to surprise significantly to the downside to derail a December lift-off.**

Exhibit 2: December hike probability has increased…
Implied probability of a Fed rate hike ahead of the meeting



Source: Bloomberg, Goldman Sachs Global Investment Research.

Exhibit 3: …and markets price divergence in rate policy
3-month LIBOR: dotted lines show path implied by forwards



Source: Bloomberg, Goldman Sachs Global Investment Research.

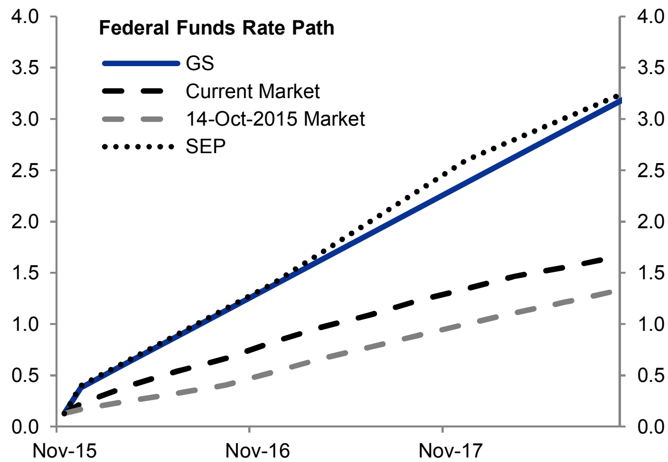
With the timing of Fed lift-off less uncertain the focus has shifted to the steepness of the rate path. The Fed has continually signaled increases in interest rates will be gradual, most recently in the FOMC minutes. However, despite some shift upward in recent weeks, the forwards still imply a slower rise than we think is likely and much below historical Fed rate hike cycles (Exhibit 4). **Our economists' forecast calls for 75-100 bp cumulative Fed hikes during 2016 (Fed Funds would end the year at 1.4%) and a further 100 bp tightening during 2017 (at the end of which Fed Funds would stand at 2.4%)**, closely in line with the recent median FOMC projections (see Exhibit 5).

Exhibit 4: The market expects a more shallow FF path…
Change in Fed funds rate around historical first hikes

	Change in Fed funds rate (bps)						Rate at
	-12m	-6m	-3m	+3m	+6m	+12m	Hike
20/04/1976	-75	-13	0	38	25	113	475
30/11/1976	-13	-75	-38	113	113	175	475
07/08/1980	-63	-400	-150	500	600	550	1000
29/04/1983	-450	-100	0	113	100	200	850
15/12/1986	-212	-100	0	12	87	100	588
28/03/1988	50	-75	-38	100	175	325	650
03/02/1994	0	0	0	75	125	300	300
29/06/1999	-75	0	0	50	75	175	475
29/06/2004	0	0	0	75	125	200	100
Average	**-93**	**-85**	**-25**	**120**	**158**	**238**	
Median	**-63**	**-75**	**0**	**75**	**113**	**200**	

Source: Bloomberg, Goldman Sachs Global Investment Research.

Exhibit 5: …than do our economists and the Fed
GS forecast, Federal fund futures implied, FOMC SEP median



Source: Bloomberg, Goldman Sachs Global Investment Research.

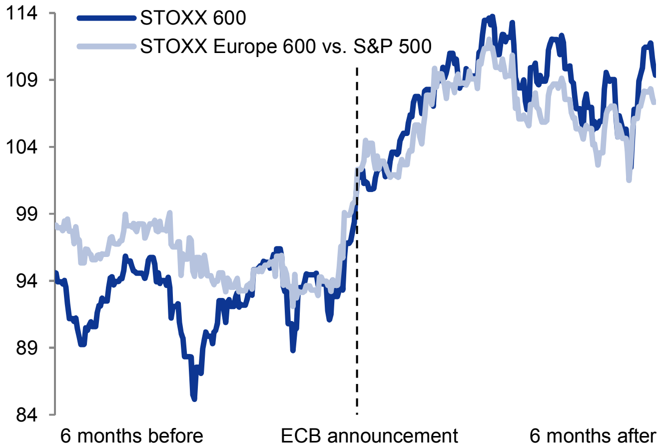
On the other hand, we expect the ECB to ease further at the December meeting to counter downside risks to inflation (see *European Economics Analyst: Europe's outlook: Resilient growth, weak inflation, easy policy,* November 19, 2015). Our economists expect the rate on the ECB's deposit facility to be lowered by 10 bp to -30 bp, while the main refinancing rate is left unchanged at 5 bp, but the risks are skewed to a bigger cut. They expect QE to be extended through the end of 3Q2017 and the ECB to stress the open-ended character of the program and the conditionality on inflation. **While we expect a similar divergence for Japan, there is more uncertainty over BOJ easing near-term** (see *Japan Economics Analyst: 2016 Japan Outlook: Politics set to play a key role*, November 19, 2015). Our economists expect additional easing at the BOJ's January 29, 2016 meeting.

ECB and Fed combined should drive cross-asset divergence

The divergence of monetary policy, between the Euro area/Japan on the one side and the US/UK on the other, has been one of the key cross-asset trends since 2014. In the second half of 2015 the divergence took a pause with tighter financial conditions and weaker global growth delaying the first Fed rate hike. But we believe in the resurgence of divergence and as we enter December the focus is likely to be back on Europe/US divergence with the expectation for policy shifts at both the ECB and Fed meetings.

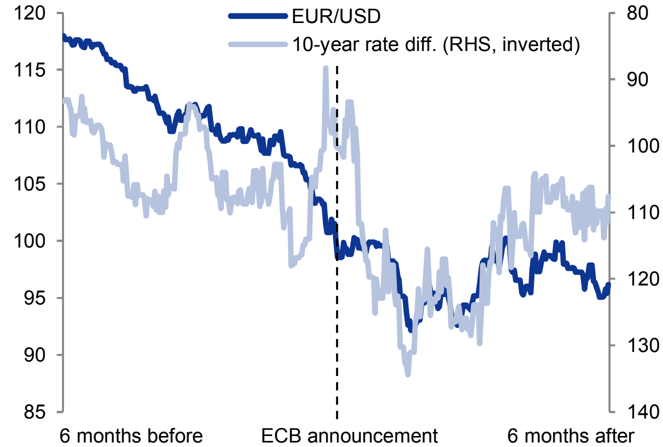
The ECB announcement in January this year has been a strong driver of cross-asset divergence: European equities outperformed the US through the event, also delivering a positive absolute return (Exhibit 6) **and EUR/US$ weakened alongside widening rate differentials** (Exhibit 7). **As we show in the section below, those patterns are in line with the historical experience around first Fed rate hikes and both drivers taken together could result again in strong and consistent divergence.**

Exhibit 6: European equities outperformed into ECB QE
Equity performance around the ECB QE announcement



Source: Goldman Sachs Global Investment Research.

Exhibit 7: EUR/US$ weaker & widening rate differentials
EUR/US$ and 10-year rate differential around ECB QE



Source: Goldman Sachs Global Investment Research.

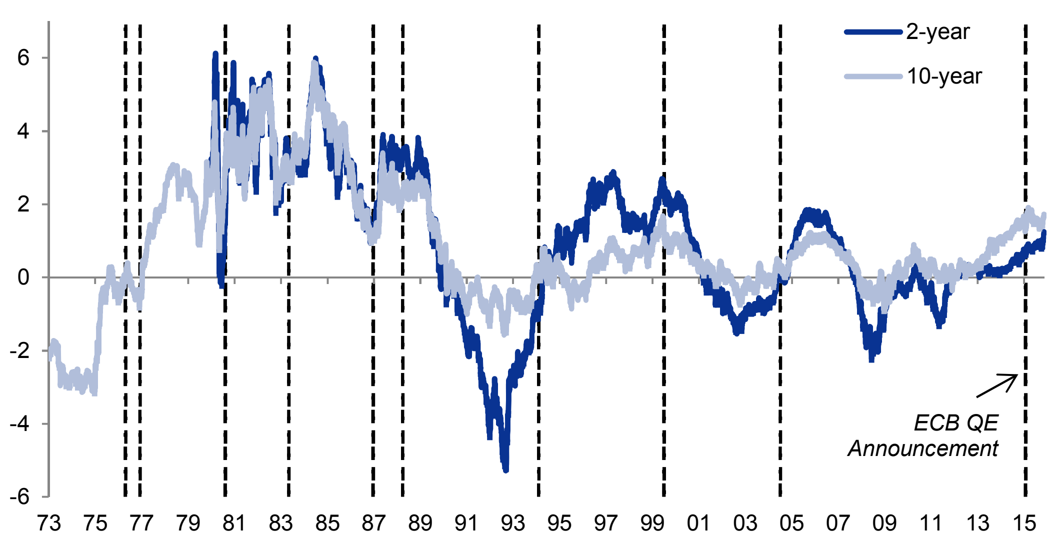
Europe vs. US cross-asset performance around first Fed rate hikes

Below we look at cross-asset divergence between Europe and the US when the Fed hiked since the 1970s – it usually resulted in European equities outperforming the US, a weaker EUR/US$ and a wider 10-year US/Germany rate differential.

(1) US vs. German 10-year rate differential

Key implications of monetary policy divergence are widening rate differentials. **We think US vs. German 10-year rate differentials are likely to widen further driven by a combination of diverging monetary policy, inflation, GDP growth and the countries' fiscal positions** (see *Global Economics Weekly: US-German long-end interest rate spreads: Tighter or wider?*, June 24, 2015). In the near-term the ECB and Fed meetings are likely to provide strong catalysts for further widening.

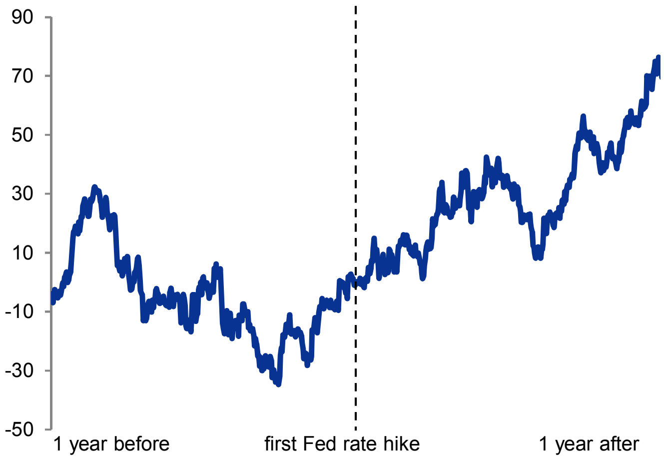
Exhibit 8: US vs. Germany 10-year rate differential tends to widen post a Fed rate hike
2- and 10-year rate differential (US vs. Germany); lines show first Fed rate hikes after easing



Source: Datastream, Goldman Sachs Global Investment Research.

Historically the 10-year rate differential has pretty consistently widened post the first Fed rate hike with the exception of 1999, when the ECB hiked rates very shortly after the Fed, resulting in less divergence. The average widening after 12 months was 82 bps, the median 60 bps. With longer-dated German 10-year rates anchored due to ECB QE, we think the potential for further widening remains strong. The rate differential has already widened without a Fed hike with the ECB's first QE announcement in January 2015. **But we expect further widening to around 220 bps by end-2016, well above the post-1990s average** (see *Macro Rates Analyst: 2016 Rates Outlook: A Reflationary Year*, November 20, 2015).

Exhibit 9: 10-year rate differential between the US and…
Average 10-year rate differential around first Fed rate hike



Source: Datastream, Goldman Sachs Global Investment Research.

Exhibit 10: …Germany tends to widen post Fed rate hike
10-year rate differential (US vs. Germany)

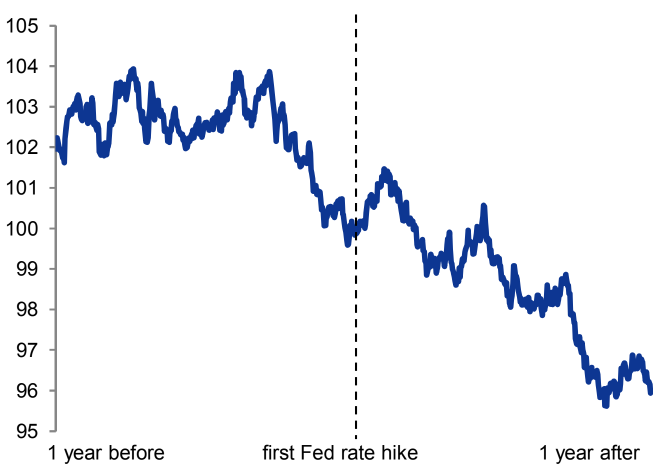
	Change in rate differential (bps)					
	-12m	-6m	-3m	+3m	+6m	+12m
20/04/1976	28	13	49	-3	-42	125
30/11/1976	-11	-55	0	92	168	223
07/08/1980	155	-57	198	95	58	73
29/04/1983	-237	16	-27	78	87	212
15/12/1986	-158	-78	-51	10	121	142
28/03/1988	64	-37	-14	-17	6	16
03/02/1994	68	66	27	52	28	3
29/06/1999	73	64	22	-59	-36	-60
29/06/2004	61	36	39	-23	35	47
Average	**2**	**-6**	**24**	**28**	**59**	**82**
Median	**63**	**-11**	**11**	**31**	**47**	**60**

Source: Datastream, Goldman Sachs Global Investment Research.

(2) EUR/US$ downside

Widening rate differentials are a key driver of our forecast of further Dollar appreciation (see *FX Views: 2016 – a stronger Dollar, both now and later*, November 22, 2015). The Euro generally depreciated vs. the Dollar post a Fed rate hike, with the exceptions being 1986 and 1994. Our FX team forecast roughly a 20% appreciation in the Dollar vs. G10 currencies by end-2017. They expect EUR/US$ to go to 0.95 over the next 12-months but this level could be reached sooner. Until the ECB meeting they expect 1.05 and parity by year-end.

Exhibit 11: EUR/US$ tends to weaken…
Average performance EUR/US$ around the first Fed rate hike



Source: Datastream, Goldman Sachs Global Investment Research.

Exhibit 12: …post the first Fed rate hike
Performance of EUR/US$ around first Fed rate hike

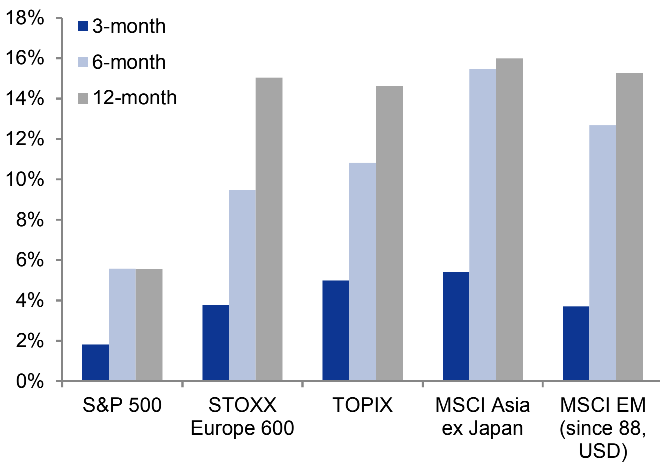
	Change in EUR/US$					
	-12m	-6m	-3m	+3m	+6m	+12m
20/04/1976	-17%	-12%	-10%	0%	0%	-2%
30/11/1976	-11%	0%	0%	-2%	-1%	-2%
07/08/1980	0%	-3%	0%	-8%	-16%	-30%
29/04/1983	-12%	-2%	-4%	-7%	-8%	-11%
15/12/1986	21%	8%	1%	7%	9%	21%
28/03/1988	9%	9%	-2%	-9%	-12%	-10%
03/02/1994	-7%	-1%	-2%	5%	9%	10%
29/06/1999	-4%	-12%	-4%	3%	-3%	-8%
29/06/2004	6%	-3%	0%	2%	12%	0%
Average	**-2%**	**-2%**	**-2%**	**-1%**	**-1%**	**-4%**
Median	**-4%**	**-2%**	**-2%**	**0%**	**-1%**	**-2%**

Source: Datastream, Goldman Sachs Global Investment Research.

(3) Europe vs. US equity outperformance

As we have highlighted before, US equities have generally underperformed other developed markets, such as Europe and Japan, after the first Fed rate hike (see *GOAL 2H outlook: Riskier recovery; near-term relief but risks remain*, July 20, 2015). This is consistent with our current regional equity allocations of Overweight Europe and Japan and Underweight the US on a 12-month basis. **We also upgraded Europe on a 3-month basis in our last asset allocation update** (see *GOAL Flash: Equity market concerns are easing with central bank easing*, October 25, 2015) **ahead of potential ECB easing and downgrade US equities in our asset allocation above**. Our US equity strategy team expects flat returns for the S&P 500 in 2016 (see *2016 US Equity Outlook: Rising rates, bifurcated market*, November 23, 2015).

Exhibit 13: Non-US equity markets tend to outperform after the first Fed rate hike
Average total return after first Fed rate hike (since 1976, local)



Source: Datastream, Goldman Sachs Global Investment Research.

Exhibit 14: Europe outperformed the US in the 12 months after the first Fed rate hike (except in 1986 and 1994)
Europe vs. US relative performance around Fed rate hikes

	Total relative return Europe vs. US					
	-12m	-6m	-3m	+3m	+6m	+12m
20/04/1976	7%	7%	4%	-2%	-5%	10%
30/11/1976	-2%	-5%	2%	11%	21%	29%
07/08/1980	-3%	-1%	-4%	7%	8%	8%
29/04/1983	-11%	-1%	5%	5%	3%	24%
15/12/1986	0%	0%	-8%	-8%	-3%	-11%
28/03/1988	-3%	-6%	-1%	4%	6%	15%
03/02/1994	31%	14%	8%	-1%	-4%	-13%
29/06/1999	-13%	1%	1%	5%	10%	13%
29/06/2004	4%	5%	2%	1%	-2%	10%
Average	**1%**	**2%**	**1%**	**2%**	**4%**	**9%**
Median	**-2%**	**0%**	**2%**	**4%**	**3%**	**10%**

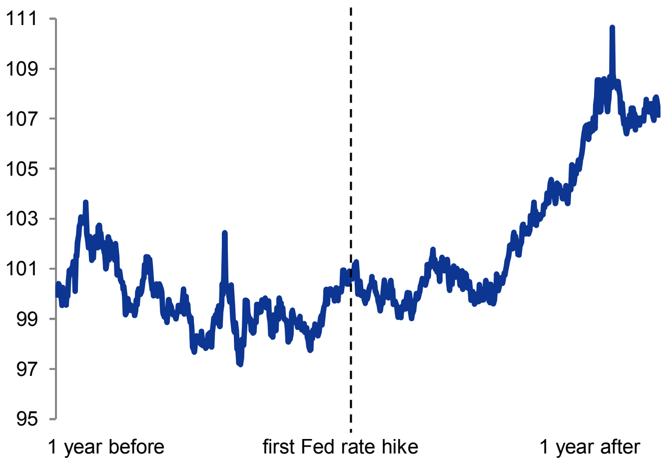
Source: Datastream, Goldman Sachs Global Investment Research.

European equities have pretty consistently outperformed their US counterparts past the first Fed rate hike and the outperformance gets particularly pronounced after 12 months. In the near-term, on average, the outperformance was less consistent. Also, the two periods European equities did not outperform the US post a first Fed rate hike were in 1986 and 1994, which were periods when the Euro strengthened against the Dollar. However, with more ECB easing possible by year-end we expect further Euro weakness.

A weaker Euro is likely to serve as a strong catalyst for outperformance of European vs. US equities. During the summer financial conditions tightened in all markets owing to the global "risk-off" and there has been a significant appreciation of trade-weighted euro and yen currencies, driven by the RMB devaluation coupled with broad EM FX weakness. As we showed, equity/FX correlations have been at their most negative historical levels recently (see *GOAL: Lost in translation; Equity/FX correlations back to extremes*, October 2, 2015), suggesting the market is very receptive to a 'QE trade'.

A wider US vs. Germany 10-year rate differential also tends to support relative valuations for Europe vs. the US (see *Strategy Matters: Advantage Europe*, July 22, 2015). Rising US rates tend to put pressure on equity valuations - our US equity strategy team examined the market implications around three previous initial rate hikes: February 1994, June 1999, and June 2004. The S&P 500 P/E contracted during the three months following each rate hike by an average of 8% (see *2016 US Equity Outlook: Rising rates, bifurcated market*, November 23, 2015). **And after strong P/E multiple expansion with lower rates in recent years, US valuations appear more vulnerable to higher rates than normal.** Indeed, history shows an increase in relative valuations of Europe vs. the US over the 12 months post the first Fed rate hike in a cycle. Exceptions were again 1986 and 1994.

Exhibit 15: European equities tend to outperform the US post the first Fed rate hike…
Average performance Europe vs. US equities around the first Fed rate hike



Source: Datastream, Goldman Sachs Global Investment Research.

Exhibit 16: … and valuations have on average increased for Europe vs. the US over the 12 months following
Change in relative P/E ratio around the first Fed rate hike

	Change in P/E					
	-12m	-6m	-3m	+3m	+6m	+12m
20/04/1976	-9%	4%	-3%	7%	-6%	4%
30/11/1976	-13%	-4%	-2%	6%	15%	22%
07/08/1980	-20%	-13%	-5%	0%	-1%	17%
29/04/1983	-20%	-8%	-3%	-1%	-3%	8%
15/12/1986	0%	6%	-5%	-10%	-5%	-10%
28/03/1988	-14%	-20%	7%	-5%	0%	5%
03/02/1994	30%	14%	6%	2%	-6%	-13%
29/06/1999	-11%	0%	0%	5%	9%	12%
29/06/2004	4%	4%	1%	2%	-2%	8%
Average	**-6%**	**-2%**	**-1%**	**1%**	**0%**	**6%**
Median	**-11%**	**0%**	**-2%**	**2%**	**-2%**	**8%**

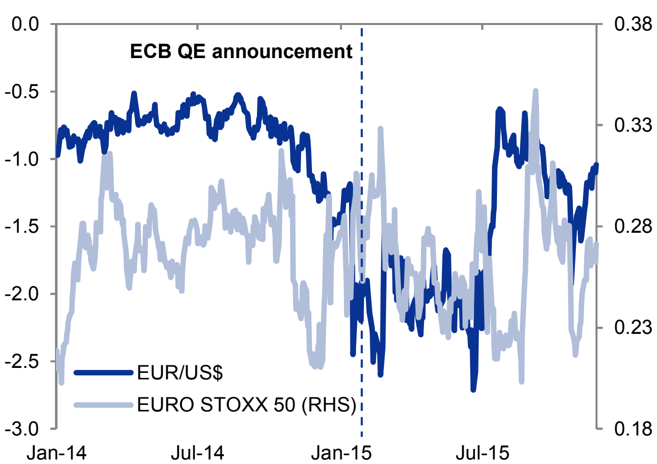
Source: Datastream, Goldman Sachs Global Investment Research.

Positioning for Europe/US divergence appears light across assets

(1) EUR/US$ risk reversals are still well above levels from 1Q2015

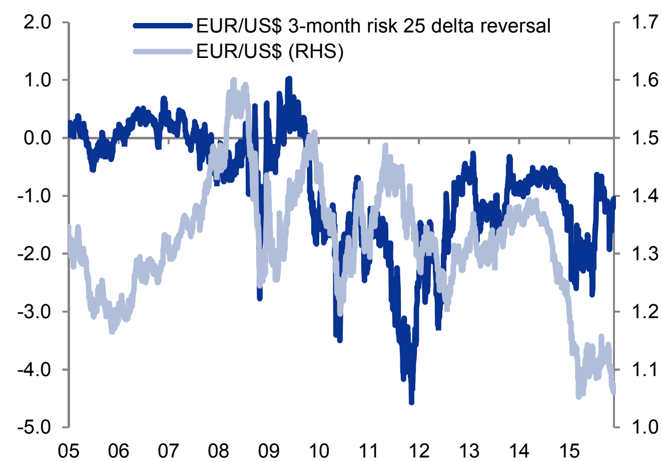
One way to look at investor positioning for an ECB QE trade is to compare pricing of EUR/US$ and EURO STOXX 50 risk reversals. Both are still well above the levels seen after the first ECB QE announcement, and looking at farther back in history shows that EUR/US$ risk reversals are still well above the levels seen during the Euro-area crisis, when markets were pricing the risk of a Euro break-up. However, of course they are priced well below the levels from before when there was little skew in EUR/US$ options.

Exhibit 17: EUR/US$ positioning does not appear high
EUR/US$ risk reversal vs. EURO STOXX 50 normalised skew (3-month, 25 delta)



Source: Goldman Sachs Global Investment Research.

Exhibit 18: Before the Euro area crisis there was no skew
3-month EUR/US$ risk reversal vs. EUR/US$



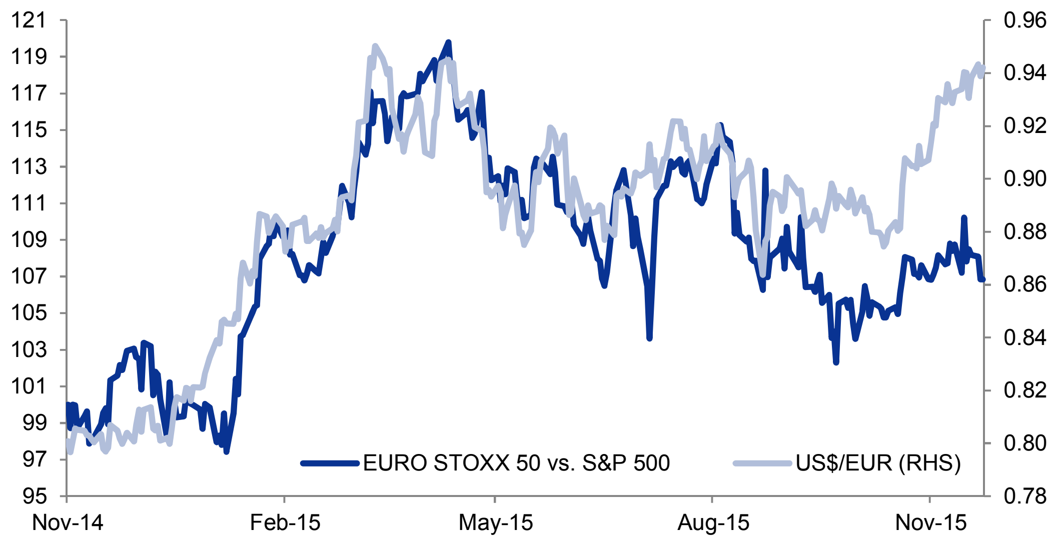
Source: Goldman Sachs Global Investment Research.

(2) European vs. US equity performance has lagged recent FX moves

As we highlighted in our last GOAL, European equities should have gotten a tailwind from the weakening of the Euro, both vs. the Dollar and on a trade-weighted basis (see *GOAL: Lost in translation; Equity/FX correlations back to extremes*, October 2, 2015). **However, so**

far the relative performance of European equities vs. the US has lagged the currency. This is despite a stronger European macro backdrop recently. US equities have recovered well from the August drawdown with a pick-up of growth and with expectations for a dovish Fed rate hike cycle building.

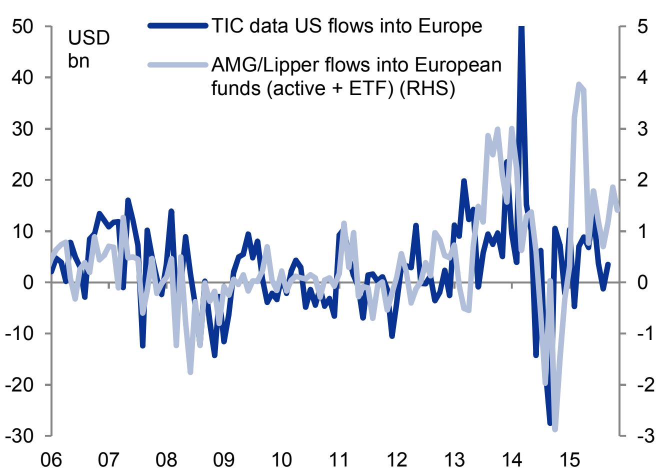
Exhibit 19: EURO STOXX 50 vs. S&P 500 performance has lagged the weaker US$/EUR
EURO STOXX 50 vs. S&P 500 relative performance and US$/EUR



Source: Goldman Sachs Global Investment Research.

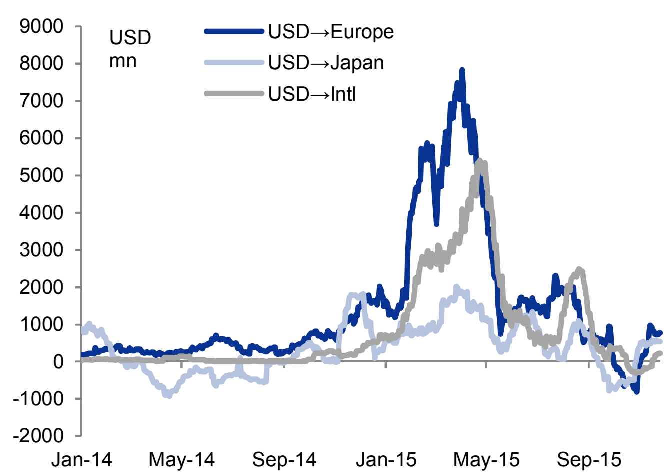
(3) European equity flows picking up only slowly, also for currency-hedged ETFs
Indeed, while US investor flows into European equities have turned positive recently, they have still lagged 1Q (see *Strategy Espresso: Flows into European equities remain positive*, November 18, 2015). At the beginning of this year, when the ECB announced QE, flows to USD-denominated shares into European (and International incl. Europe) equities increased materially - those flows were indicative of investors putting on a 'QE trade'. As the dollar depreciated against the Euro and Yen driving particularly poor currency-hedged performance, ETF flows turned negative after the summer sell-off (see *GOAL: Lost in translation; Equity/FX correlations back to extremes*, October 2, 2015). With a weaker Euro, currency-hedged ETFs should now get a pick-up in inflows.

Exhibit 20: Inflows from US investors have picked up…
TIC data is monthly; AMG/Lipper data is 4-week sums



Source: AMG/ Lipper, US Treasury, Haver, GS Global Investment Research.

Exhibit 21: … but are below the last ECB QE wave
Monthly sums of currency-hedged ETF flows

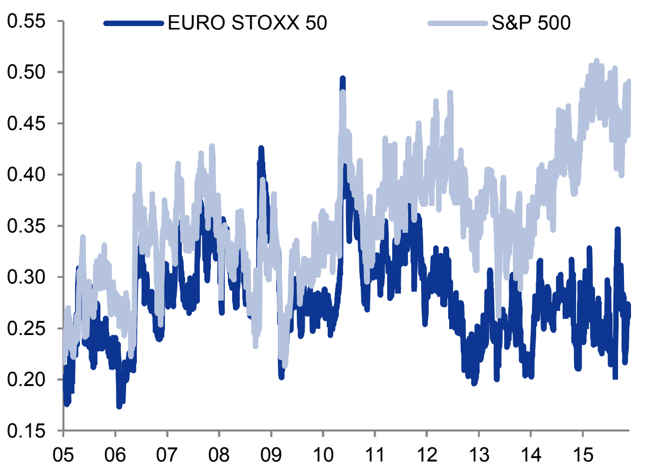


Source: Bloomberg, Goldman Sachs Global Investment Research.

(4) Equity options are pricing some divergence, but mainly driven by the US

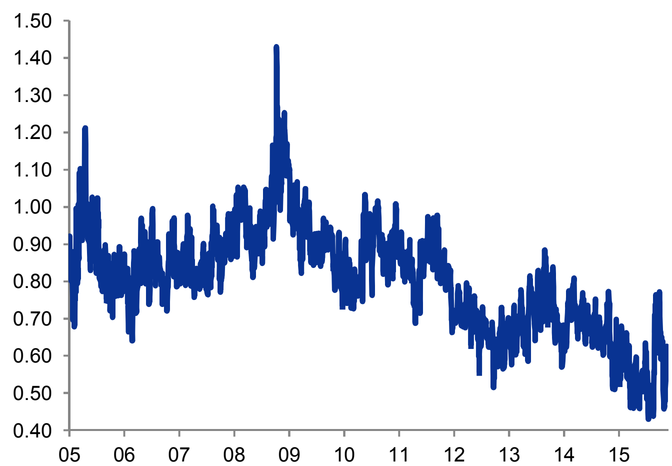
In equity options some Europe/US divergence is priced. 3-month normalized skew, the cost of puts relative to calls, is much higher for the S&P 500 while for EURO STOXX 50 it is below its 10-year average. High skew indicates supply of calls and demand for puts and thus bearish investor positioning. In fact the skew in Europe is at 10-year lows relative to the US. In the US skew might be in part elevated because of bank regulation constraining capacity to sell OTM S&P 500 puts. **But our US strategy team's sentiment indicator based on net futures positioning also remains close to low levels** (see *US Equity Views: Refreshing our S&P 500 Sentiment Indicator*, October 20, 2015).

Exhibit 22: Divergence in skew signals equity options are already pricing more potential for divergence…
3-month normalized skew EURO STOXX 50 vs. S&P 500



Source: Goldman Sachs Global Investment Research.

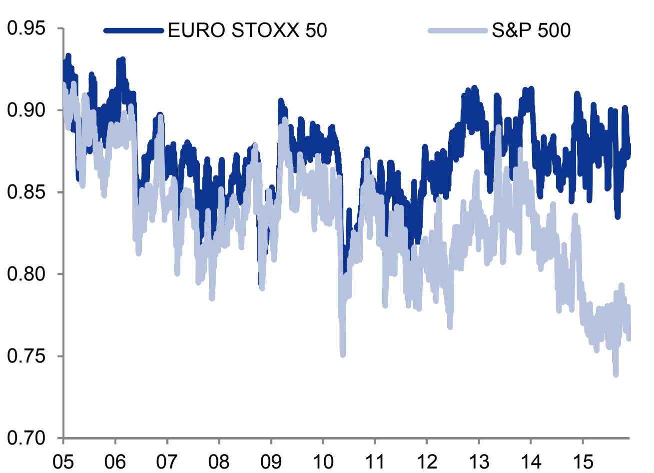
Exhibit 23: …the ratio is close to 10-year lows
Ratio of normalised skew



Source: Goldman Sachs Global Investment Research.

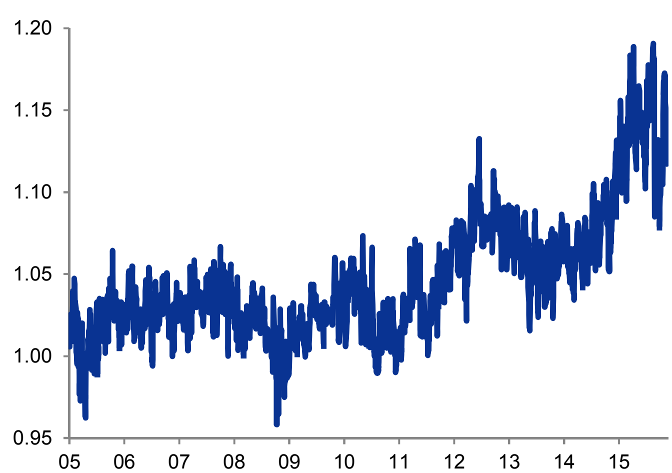
While puts might be distorted due to changes in the market micro structure, we get similar results when looking at richness of OTM vs. ATM calls. While for EURO STOXX 50 call skew is roughly in line with its 10-year average, for the S&P 500 it is close to 10-year lows. As a result the ratio between EURO STOXX 50 and S&P 500 call skew is close to 10-year highs. We think this is at least in part due to call overwriting from investors in the past 2 years with increasing concerns on constrained returns for the S&P 500.

Exhibit 24: S&P 500 calls have gotten cheaper since 2014 while EURO STOXX 50 is roughly unchanged…
3-month 25 delta call vs. ATM implied volatility



Source: Goldman Sachs Global Investment Research.

Exhibit 25: …the ratio again is close to 10-year highs
Ratio of EURO STOXX 50 vs. S&P 500 call skew

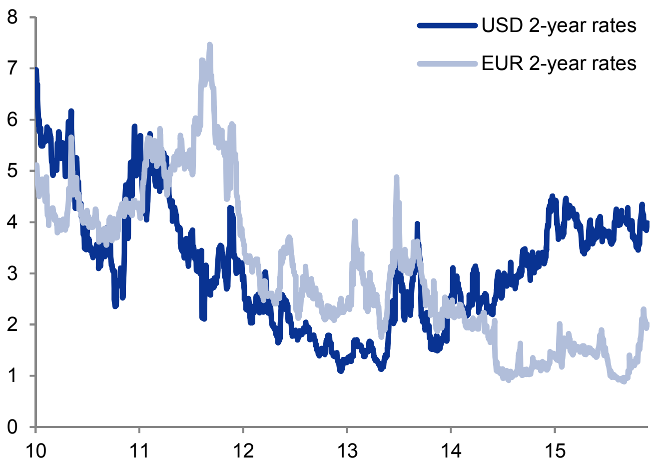


Source: Goldman Sachs Global Investment Research.

(5) EUR & USD implied rate volatility have diverged since 2014, but less recently

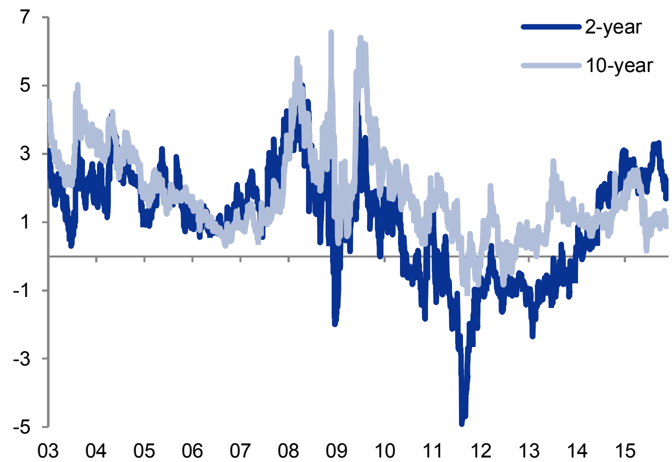
Uncertainty about stance on monetary policy and the inflation outlook are two important macro determinants of rate volatility. **Short-end rates tend to be more sensitive to uncertainty about monetary policy, while long-end rates tend to be more sensitive to the inflation outlook** (see *Macro Rates Analyst: Volatility of US Dollar Rates Set to Rise Further*, March 1, 2015). Also, moves might be exacerbated by illiquidity in fixed-income markets, as both the 'flash crash' in October 2014 and the 'Bund Tantrum' in May 2015 showed.

Exhibit 26: 2-year USD rate vol has trended up since 2014
3-month ATM implied rate volatility



Source: Goldman Sachs Global Investment Research.

Exhibit 27: 2-year rate vol differential comparable to 2004
Differential USD & EUR 3-month ATM implied rate volatility



Source: Goldman Sachs Global Investment Research.

Implied volatility for US 2-year rates has already increased since the beginning of 2014 in anticipation of the first Fed rate hike – with the first move upward in interest rates by the ECB much further away (we expect 3Q2017), 2-year EUR rate volatility should remain more anchored. We expect more swings in both Euro and US 10-year rates as longer-dated rates are driven more by inflation uncertainty on a global basis. After diverging around ECB QE, the spread in implied rate volatility in the 10-year space has come down with the 'Bund Tantrum'. Our rates teams expects realized rate volatility to remain elevated at least until there is uncertainty about the pace of hikes in the US and around the underlying trend in inflation in major economies. Hence, in their view, any decline in implied volatility would be a good buying opportunity (see *Macro Rates Analyst: 2016 Rates Outlook: A Reflationary Year*, November 20, 2015).

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Asset class forecast returns and performance

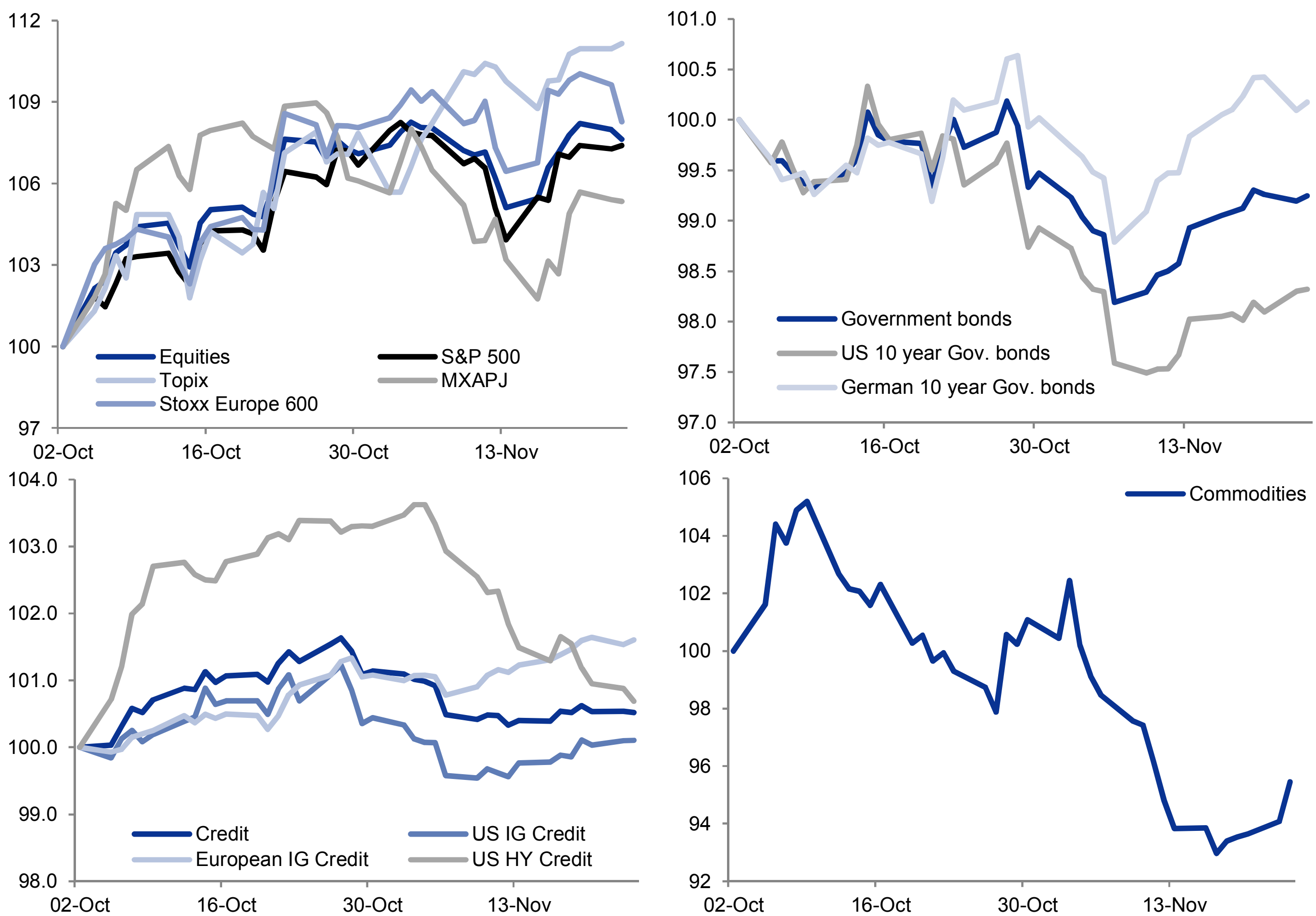
Exhibit 28: Goldman Sachs' 3- and 12-month return forecasts by asset class

	Return in % over last			Current	Forecasts			Up/ (downside) in %	
	12 m	3 m	1 m	Level	Q1 2016	12 m	Unit	Q1 2016	12 m
Equities									
S&P 500 ($)	3.1	11.0	0.9	2089	2025	2075	Index	-3.1	-0.7
Stoxx Europe 600 (€)	12.1	10.3	-0.3	381	375	400	Index	-1.6	5.0
MSCI Asia-Pacific Ex-Japan ($)	-9.7	9.4	-3.2	419	400	420	Index	-4.4	0.3
Topix (¥)	16.9	9.3	3.8	1595	1550	1750	Index	-2.8	9.7
10 Year Government Bond Yields									
US	2.9	-1.1	-1.0	2.24	2.50	2.96	%	26 bps	72 bps
Germany	3.3	0.9	0.1	0.51	0.55	0.76	%	4 bps	25 bps
Japan	3.4	0.0	0.0	0.32	0.40	0.56	%	8 bps	24 bps
UK	1.8	0.5	-0.1	1.87	2.20	2.38	%	34 bps	52 bps
5 year credit spreads*									
iBoxx USD	0.5	0.3	-0.6	129	123	102	Bps	-6 bps	-27 bps
BAML HY Master Index II	-3.9	-1.3	-2.6	628	619	514	Bps	-9 bps	-114 bps
iBoxx EUR	0.6	0.6	0.7	136	122	95	Bps	-14 bps	-41 bps
Commodities									
WTI	-48.0	11.5	-1.9	42	38	50	$/bbl	-9.9	18.6
Copper	-30.1	-6.6	-10.8	4608	4800	4500	$/mt	4.2	-2.3
Aluminium	-32.9	-5.9	-2.9	1446	1500	1550	$/mt	3.7	7.2
Gold	-10.7	-7.0	-7.8	1070	1100	1000	$/troy oz	2.8	-6.6
Wheat	-14.6	-3.0	0.5	489	530	530	Cent/bu	8.3	8.3
Soybeans	-16.3	-1.6	-3.6	863	875	875	Cent/bu	1.4	1.4
Corn	-14.0	-5.4	-4.7	371	375	375	Cent/bu	1.1	1.1
FX									
EUR/USD	-14.3	-8.0	-3.3	1.06	1.00	0.95		-5.5	-10.2
USD/JPY	3.4	3.2	1.0	123	125	130		1.8	5.8

** We show performance for credit and gov. bonds in total return terms, but current level and forecasts are for spreads and rates, respectively.*

Source: Goldman Sachs Global Investment Research.

Exhibit 31: Performance of asset classes since our last GOAL report (October 2, 2015)



Source: Datastream, Bloomberg, Goldman Sachs Global Investment Research.

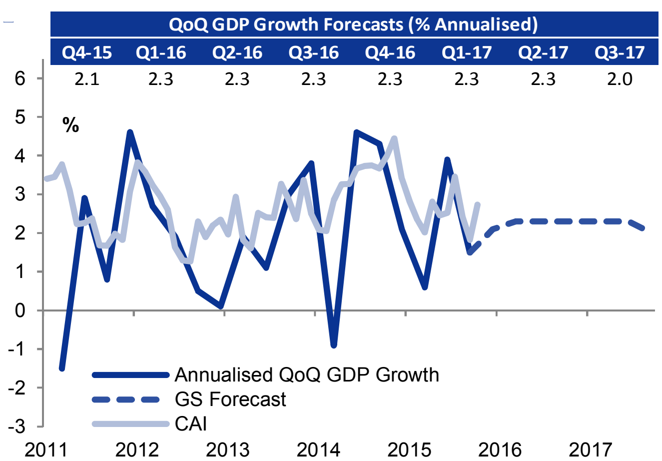
Key macro forecasts

Exhibit 29: Our key forecasts across asset classes

Asset Class	Benchmark Weight	Q1 2016 Total Return		12-month Total Return	
		Local currency	In USD	Local currency	In USD
Equities	**35**	**-0.6**	**-3.3**	**6.3**	**1.1**
S&P 500	40	-2.0	-2.0	1.5	1.5
STOXX Europe 600	30	0.2	-5.3	8.6	-2.5
MSCI Asia Pac ex Japan	20	1.4	-2.7	9.6	3.8
TOPIX	10	-1.8	-3.5	11.7	5.2
10 yr. Government Bonds	**45**	**-1.0**	**-2.6**	**-3.1**	**-8.1**
US	50	-1.8	-1.8	-4.3	-4.3
Germany	50	-0.2	-3.4	-1.8	-11.9
5 yr. Corporate Bonds	**10**	**0.2**	**-0.9**	**2.3**	**0.2**
US: iBoxx USD Dom. Corporates	60	-0.4	-0.4	0.3	0.3
BAML HY Master Index II	20	1.2	1.2	8.2	8.2
Europe: iBoxx EUR Corporates	20	0.9	-4.6	2.6	-7.9
Commodities (GSCI Enhanced)	**5**	**-8.3**	**-8.3**	**-1.0**	**-1.0**
Cash	**5**	**0.1**	**-2.6**	**0.2**	**-4.9**
US	50	0.1	0.1	0.3	0.3
Germany	50	0.1	-5.4	0.2	-10.0
FX		**Q1 2016 target**	**Return**	**12 month target**	**Return**
EUR/$		1.00	-5.5	0.95	-10.2
$/YEN		125	1.8	130	5.8

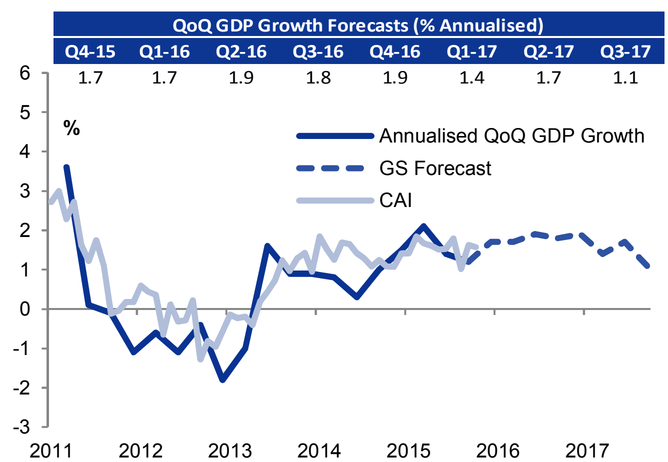
Source: Goldman Sachs Global Investment Research.

Exhibit 30: US GDP growth vs. our CAI



Source: Goldman Sachs Global Investment Research.

Exhibit 31: Euro-area GDP growth vs. our CAI



Source: Goldman Sachs Global Investment Research.

Exhibit 32: Our forecasts for economic growth vs. the consensus

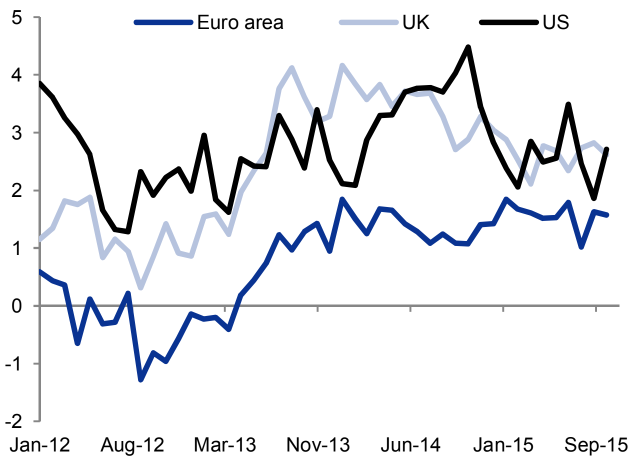
% yoy	2013	2014E	2015E		2016E	2017E	2018E
		GS	GS	Consensus*	GS	GS	GS
USA	1.5	2.4	2.4	2.5	2.2	2.2	2.0
Japan	1.6	-0.1	0.6	0.6	1.0	0.7	0.7
Euro Area	-0.2	0.9	1.5	1.5	1.7	1.6	1.6
China	7.7	7.3	6.9	6.8	6.4	6.3	6.1
Brazil	2.7	0.1	-3.2	-2.8	-1.6	1.6	2.4
Advanced Economies	1.2	1.9	1.9	2.0	2.0	2.0	1.9
World	**3.2**	**3.4**	**3.1**	**3.2**	**3.5**	**3.7**	**3.8**

** Consensus Economics October 2015*

Source: Consensus Economics, Goldman Sachs Global Investment Research.

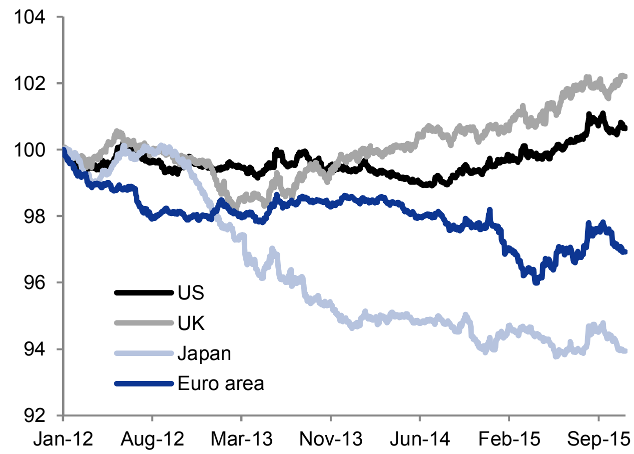
Macro monitor: Growth stabilising and FCI divergence starting

Exhibit 33: Current activity indicator (CAI)



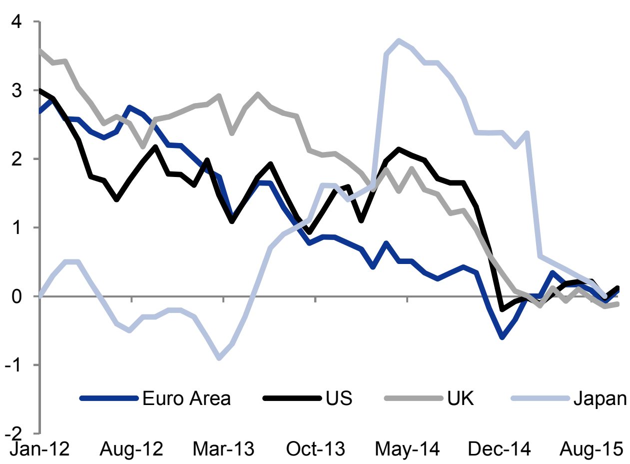
Source: Goldman Sachs Global Investment Research.

Exhibit 34: Financial condition indices (FCI)



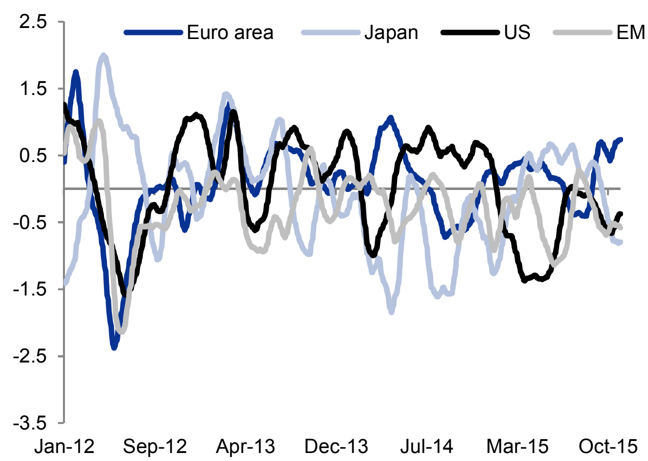
Source: Goldman Sachs Global Investment Research.

Exhibit 35: Inflation (CPI, yoy)



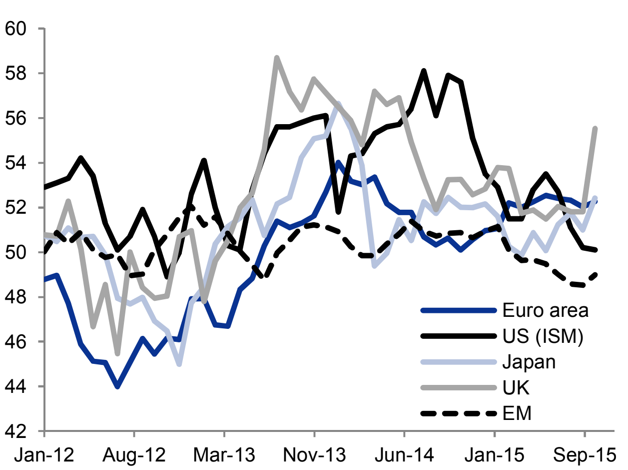
Source: Haver Analytics, Goldman Sachs Global Investment Research.

Exhibit 36: Macro surprise indices (MAP, 1-month avg)



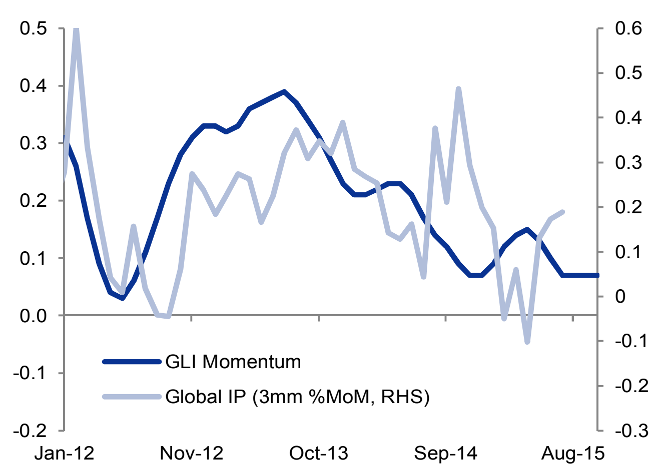
Source: Goldman Sachs Global Investment Research.

Exhibit 37: Manufacturing PMIs



Source: Markit via Haver, Goldman Sachs Global Investment Research.

Exhibit 38: GLI momentum and global IP



Source: Haver Analytics, Goldman Sachs Global Investment Research.

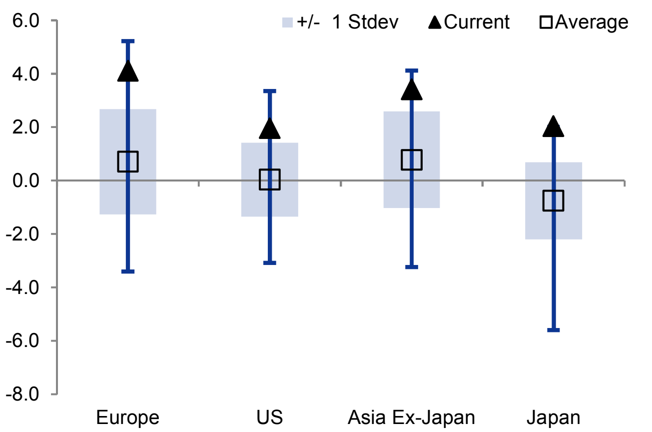
Equities (3-month Neutral, 12-month Overweight)

Exhibit 39: Forecast returns and our recommended regional weightings within equities
Total return forecasts (in local currency and in USD) and the allocation relative to benchmark on 3- and 12-month horizons

		Q1 2016				12-month						Long-term forecast		
				Price Return				Price Return		Total return		Level		CAGR to
	Current	Level	Wgt	Local	USD	Level	Wgt	Local	USD	Local	USD	2016	2017	2017 (local)
STOXX Europe 600	381	375	OW	(2)%	(5)%	400	OW	5 %	(6)%	9 %	(3)%	415	450	8 %
TOPIX	1595	1550	N	(3)%	(2)%	1750	OW	10 %	4 %	12 %	5 %	1800	1900	9 %
MSCI Asia Pac ex Japan	419	400	N	(2)%	(4)%	420	N	6 %	0 %	10 %	4 %	455	475	6 %
S&P 500	2089	2025	UW	(3)%	(3)%	2075	UW	(1)%	(1)%	2 %	2 %	2100	2200	2 %

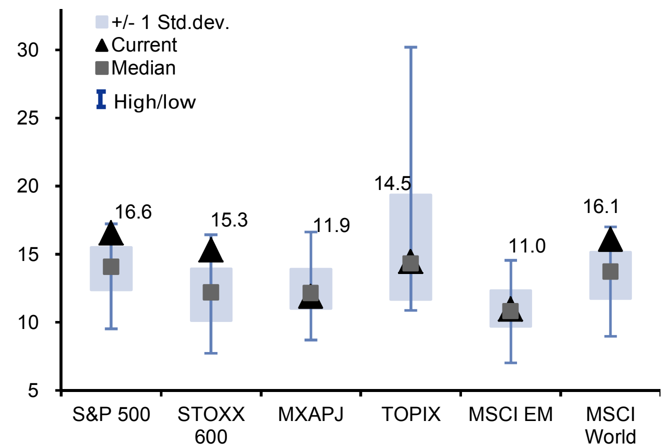
Source: Bloomberg, Datastream, Goldman Sachs Global Investment Research.

Exhibit 40: Dividend yields are high vs. real bond yields
DY minus 10-year real government bond yields. We use 5-year average inflation as proxy for inflation expectations. The distribution uses data from 1990, Asia ex-Japan from 1995



Source: Datastream, Haver, Goldman Sachs Global Investment Research

Exhibit 41: Valuation ranges for major indices over the last 10 years
12-month-forward P/E



Source: MSCI, FactSet, I/B/E/S, Goldman Sachs Global Investment Research

Exhibit 42: Global valuation metrics and earnings growth
P/E is NTM on consensus estimates, all other data is for 2014 or last 12 months

	P/E (X)	EV / EBITDA (X)	FCF Yield (%)	Div Yield (%)	P/B (X)	Net Income Margin (%)	ROE (%)	Implied ERP (%)
S&P 500	16.6	10.3	4.5	2.1	2.8	9.0	12.6	5.3
STOXX 600	15.3	9.9	4.0	3.2	1.9	6.7	9.1	7.6
MSCI Asia Pacific ex-Japan	11.9	8.0	3.8	3.5	1.5	8.5	12.5	9.5
Topix	14.5	8.3	5.1	1.7	1.4	7.0	8.2	5.1

Note : TOPIX EPS is based on fiscal, not calendar, years (i.e 2013 represents the fiscal year ending in March 2014)

	Earnings forecast		Earnings growth forecast (%)			
	GS top-down		GS top-down		Consensus bottom-up	
	2015	2016	2015E	2016E	2015E	2016E
S&P 500	$ 109	$ 120	-3	10	-6	18
Stoxx Europe 600	€ 23	€ 25	2	8	2	8
MSCI Asia Pacific ex-Japan	$ 36	$ 38	0	5	-1	7
Topix	¥ 100	¥ 113	17	13	15	5

** Asia Pac (Ex Japan) EPS integers are in USD whereas EPS Growth rates local currency effective*
** TOPIX data based on March-ending fiscal year (the year after). US, Europe and AEJ data based on December-ending fiscal year*

Source: Worldscope, I/B/E/S, Datastream, FactSet, Goldman Sachs Global Investment Research.

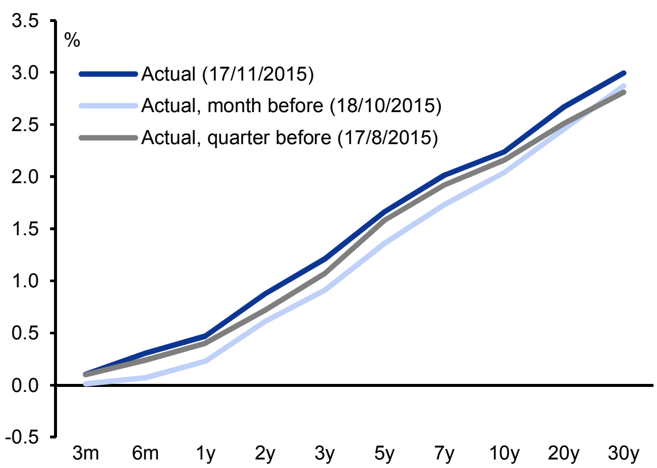
Government bonds (3-month Neutral, 12-month Underweight)

Exhibit 43: 10-year bond yields: Market vs. GS Sudoku Model*, spot and 3 months into the future

	Actual** (%)	Misvaluation against fair value***, standard deviations		Fair value***, %		Fair value change (due to change in fundamentals), t + 3mth
		CE	GS	CE	GS	GS
USA	2.24	-0.90	-1.57	2.67	3.00	0.40
Germany	0.48	-1.32	-1.59	1.41	1.60	0.22
Japan	0.30	-1.08	-1.24	0.76	0.83	0.08
UK	1.88	-0.70	-0.93	2.45	2.64	0.22
Canada	1.63	-0.99	-1.75	2.36	2.92	0.62
Australia	2.91	-0.48	-1.10	3.34	3.89	0.61
Switzerland	-0.31	-1.81	-2.19	0.74	0.96	0.23
Sweden	0.86	-0.57	-0.72	1.53	1.71	0.21

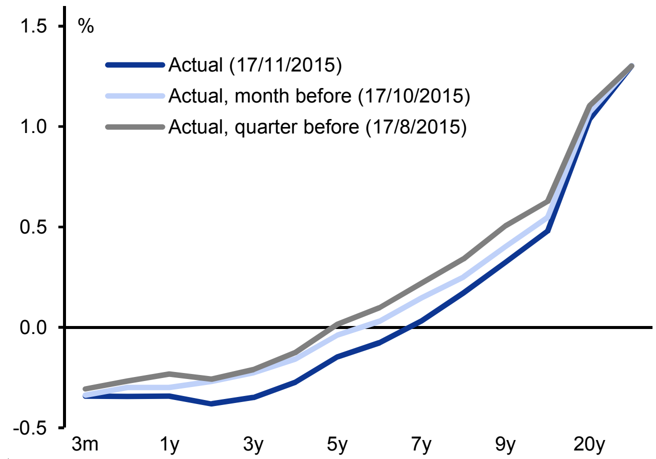
*Source: Goldman Sachs Global Investment Research; * Details in Chapter 12 of The Foreign Exchange Market (2006), Global Viewpoint 07/24 and Global Viewpoint 08/04. **Nov 19 close. ***CE stands for Consensus Economics inputs of macroeconomic fundamentals (latest available month), GS stands for GS Economic Research inputs (current month).*

Exhibit 44: USD yield curve dynamics



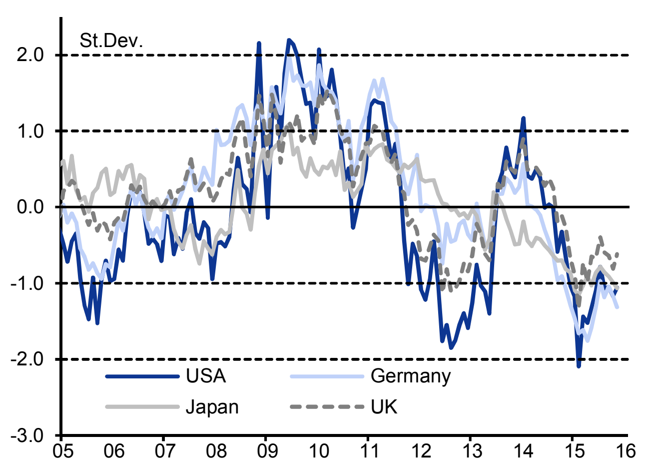
Source: Bloomberg, Goldman Sachs Global Investment Research.

Exhibit 45: DEM yield curve dynamics



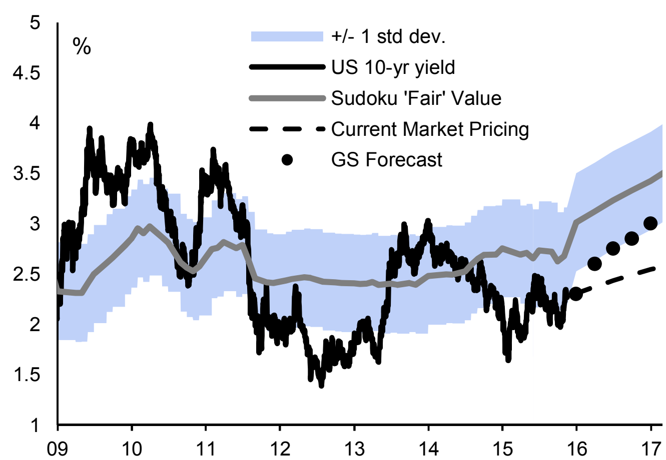
Source: Bloomberg, Goldman Sachs Global Investment Research.

Exhibit 46: Degree of 10-year bond mispricing according to GS Sudoku



Source: Goldman Sachs Global Investment Research.

Exhibit 47: 10-year US yields vs. GS Sudoku fair value

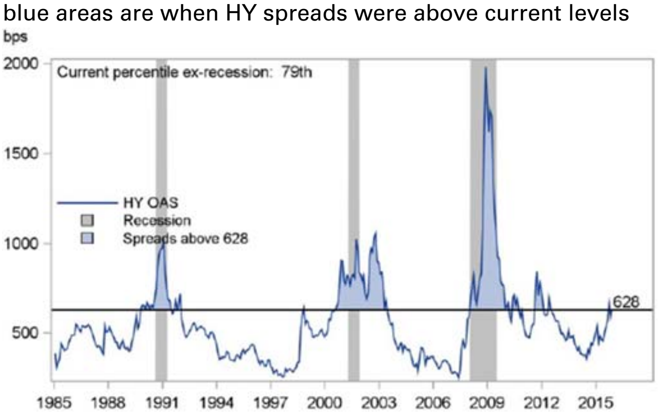


Source: Bloomberg, Goldman Sachs Global Investment Research.

Credit (3-month Overweight, 12-month Neutral)

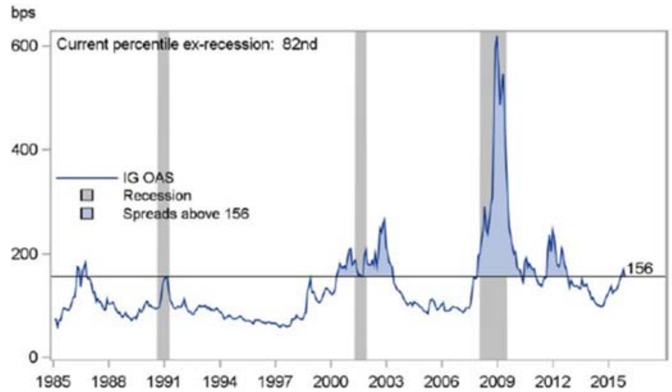
For details on the charts see *Global Credit Outlook 2016: Constructive on value, cautious on quality*, November 20, 2015.

Exhibit 48: HY spreads are abnormally high for not being in a recessionary environment…
HY OAS: vertical grey bars show recession periods and the blue areas are when HY spreads were above current levels



Source: BAML, Haver Analytics, Goldman Sachs Global Investment Research.

Exhibit 49: …and the same is true for IG spreads
IG OAS: Vertical grey bars show recession periods and the blue areas are when IG spreads were above current levels



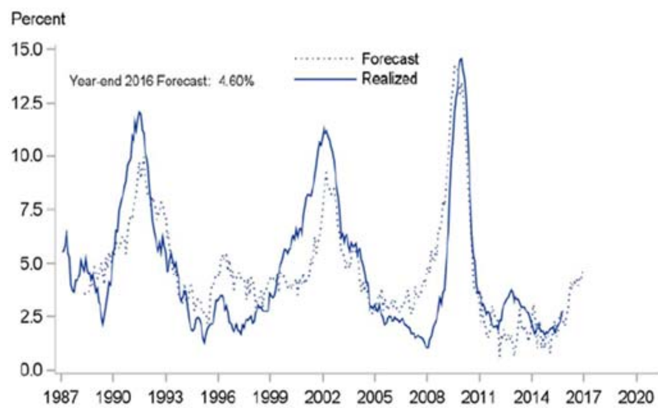
Source: Yield Book Citi Index, Goldman Sachs Global Investment Research.

Exhibit 50: We expect gradual tightening of IG and HY spreads throughout 2016

Sector	Period (Updated Nov 19, 2015)					
	2014YE	Current	2015Q4	2016Q2	2016Q4	2017Q4
USD						
IG 5y	106	127	123	111	100	88
IG Fin 5y	99	114	110	100	90	79
IG Non-Fin 5y	110	138	133	120	108	95
High Yield	504	628	619	555	504	439
BB Rated	332	405	396	360	324	280
B Rated	533	649	628	559	497	437
CCC Rated	969	1338	1277	1140	1080	931
EUR						
IG 5y	108	134	122	103	93	84
IG Fin 5y	114	130	119	97	85	77
IG Non-Fin 5y	104	138	125	108	100	90

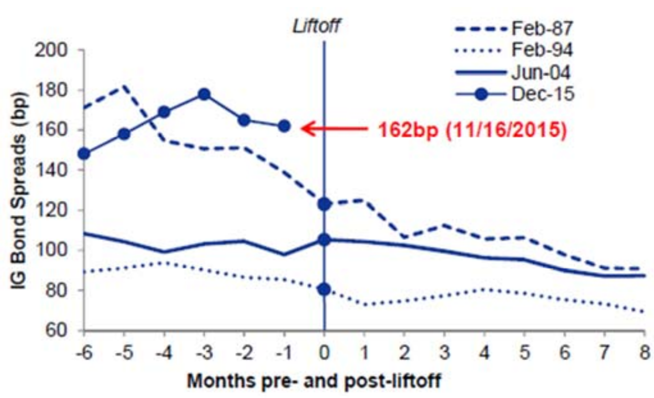
Source: BAML, Haver Analytics, iBoxx, Goldman Sachs Global Inv. Research.

Exhibit 51: We expect HY defaults will gradually increase in 2016 to the vicinity of 4.5%-5%



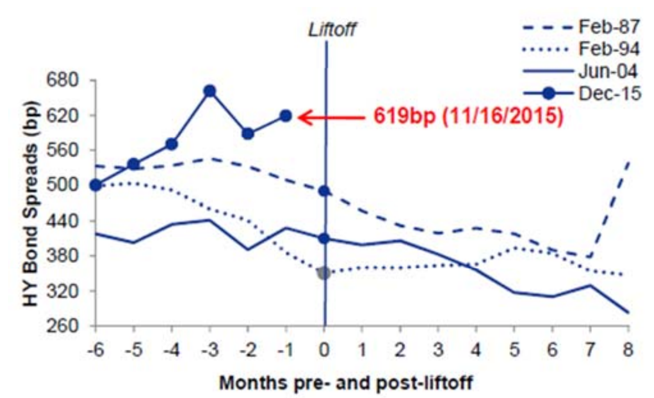
Source: Moody's, Goldman Sachs Global Investment Research.

Exhibit 52: From their elevated levels, we expect IG spreads to resist higher rates as they did in the past three Fed lift-offs



Source: BAML, Haver Analytics, Goldman Sachs Global Investment Research.

Exhibit 53: HY spreads should also prove resilient based on previous hiking cycles and their elevated levels



Source: BAML, Haver Analytics, Goldman Sachs Global Investment Research.

Commodities (Underweight)

Exhibit 54: S&P GSCI ® Enhanced Commodity Index total return forecasts

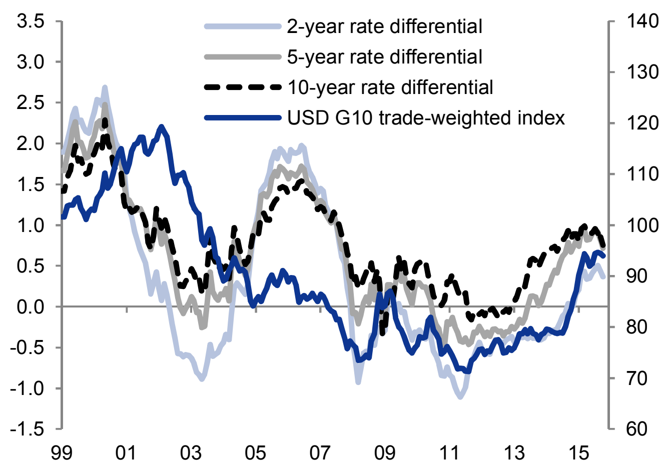
	Current Weight (%)	Returns (%) 2013	2014	2015 YTD[1]	Return forecasts (%) 3-months	6-months	12-months
S&P GSCI Enhanced Commodity Index	100.0	**-0.8**	**-31.1**	**-22.6**	**-8.3**	**-3.7**	**-1.0**
Energy	59.2	5.6	-42.2	-24.7	-14.2	-5.0	0.6
Industrial Metals	8.7	-13.0	-7.3	-26.8	0.3	-0.6	-1.3
Precious Metals	4.2	-29.7	-4.1	-9.9	2.2	-2.5	-6.9
Agriculture	19.3	-18.0	-9.3	-16.2	1.0	-0.7	-0.3
Livestock	8.7	-2.8	27.0	-22.0	-3.6	-6.0	-9.7

[1] YTD returns through November 24, 2015

Source: S&P, Goldman Sachs Global Investment Research.

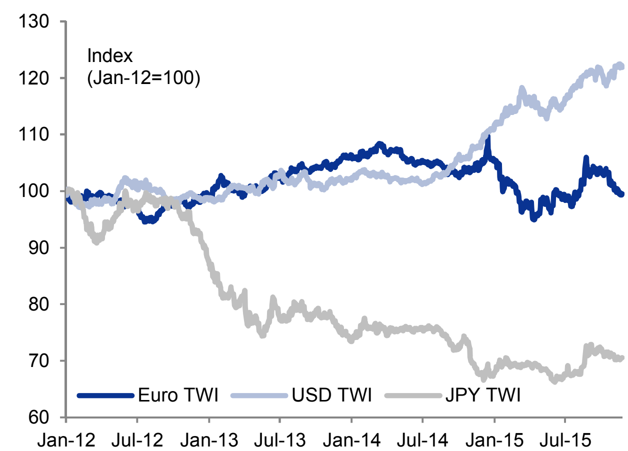
FX (Dollar-strength to continue)

Exhibit 55: We expect the US Dollar TWI to continue to strengthen vs. G10 through the end of 2017



Source: Bloomberg, Goldman Sachs Global Investment Research.

Exhibit 56: EUR, USD and JPY trade-weighted index (TWI)



Source: Goldman Sachs Global Investment Research.

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Reg AC

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